

Remarks

This invention relates to a method, apparatus, and mobile terminal, using a wireless local area network (WLAN) and an interworking function (IWF). Data is transferred through the interworking function, while control signals are transferred between support nodes. In this way, data is transferred using the high-speed capabilities of a wireless local area network, while control signals are handled in a manner which facilitates billing.

Claim 23 has been amended to improve its form.

The presumption of the Examiner, that the subject matter of the various claims was commonly owned at the time the invention covered therein was made, is correct.

The Examiner has rejected Claims 1-4, 7- 9, 11-18, and 21-22 as being unpatentable over US 2002/0181468 to Lucidarme et al, US 2003/0081607 to Kavanaugh, US 2006/0291455 to Katz et al, and US 6,957,065 to Lindholm.

Lucidarme et al relates to a cellular system 20 for communication with Internet 12. Nowhere does Lucidarme et al use a wireless local area network (WLAN) or an interworking function (IWF), nor any use of a cellular system for control signals while using a WLAN for data signals. More specifically, nowhere does Lucidarme et al show or suggest:

“a method for supporting an interworking between a wireless local area network (WLAN) and a mobile communications system”,

as specifically set forth in Claim 1. Furthermore nowhere does Lucidarme et al show or suggest:

“establishing at least one tunneling protocol - user plane tunnel between the IWF and the second support node for transferring data signals; and

establishing at least one tunneling protocol - control plane tunnel between the first support node and the second support node for transferring control signals”,

as specifically recited in Claim 1. Rather, not only does Lucidarme et al fail to show or suggest any WLAN or interworking function (IWF), Lucidarme et al processes data signals and control signals along the same path

Kavanaugh is not available to be cited against the instant application because it was filed after the priority date of the instant application. Nevertheless, the Applicants will discuss Kavanaugh as though it is available to be cited against the instant application.

Kavanaugh relates to a cellular system using tunnels. Nowhere does Kavanaugh show or suggest a WLAN or an IWF, nor the use of a cellular system for control signals while using the WLAN for data signals. More specifically, nowhere does Kavanaugh show or suggest:

“a method for supporting an interworking between a wireless local area network (WLAN) and a mobile communications system”,

as specifically set forth in Claim 1. Furthermore nowhere does Kavanaugh show or suggest:

“establishing at least one tunneling protocol - user plane tunnel between the IWF and the second support node for transferring data signals; and

establishing at least one tunneling protocol - control plane tunnel between the first support node and the second support node for transferring control signals”,

as specifically recited in Claim 1. Rather, not only does Kavanaugh fail to show or suggest any WLAN or IWF, Kavanaugh processes data signals and control signals along the same path.

Katz et al shows a WLAN in figure 30, but is similar to Lucidarme et al in processing data signals and control signals along the same path.

Lindholm relates to a cellular network having signaling capability when no speech connection is required, as described in column 3, lines 52 to 55. Nowhere does Lindholm show or suggest any WLAN, nor the use of a cell system for control signals and a WLAN for data.

It is therefore clear that even if the structure of Lucidarme et al were to be combined with Kavanaugh, Katz et al and Lindholm, the patentability of Claim 1 would not be affected.

Claims 2-14 are dependent from Claim 1 and add further advantageous features. The Appellants submit that these subclaims are patentable as their parent Claim 1.

Similarly, nowhere does Lucidarme et al show or suggest:

“means for establishing at least one tunneling protocol - user plane tunnel between the IWF and the second support node for transferring data signals; and

means for establishing at least one tunneling protocol - control plane tunnel between the first support node and the second support node for transferring control signals”,

as specifically set forth in Claim 15. Even if the structure of Lucidarme et al were to be combined with the structures of Kavanaugh, Katz et al, and Lindholm, the patentability of Claim 15 would not be affected, since none of the cited references provide different paths for data signals and control signals.

Claims 16-22 are dependent from Claim 15 and add further advantageous features. The Appellants submit that these subclaims are patentable as their parent Claim 15.

Similarly, nowhere do Lucidarme et al, Kavanaugh, Katz et al or Lindholm show or suggest:

“means for establishing data communications between said mobile terminal and a gateway general packet radio service (GPRS) support node via an inter-working function; and

means for establishing signaling communications between said mobile terminal and a gateway general packet radio service (GPRS) support node via a universal mobile telecommunications system (UMTS) terrestrial radio access network and a serving GPRS support node, said interworking function supporting an interworking between said wireless local area network and said universal mobile telecommunications system (UMTS)”,

as specifically recited in Claim 23. As pointed out above, none of the cited references provide separate paths for data communications and signaling communications. It is therefore clear that the cited references do not affect the patentability of Claim 23.

Claims 24-27 are dependent from Claim 23 and add further advantageous features. The Appellants submit that these subclaims are patentable as their parent Claim 23.

The Examiner has additionally cited US 7,054,945 to Hurtta et al against subclaims 5 and 6, which depend from Claim 1, and subclaims 19 and 20, which depend from Claim 15. Hurtta et al relates to a technique for providing an announcement in a 3G network. Nowhere does Hurtta et al show or suggest any interworking between a WLAN and a mobile communications system, using an interworking function. Nowhere does Hurtta et al establish a Tunneling Protocol-User plane tunnel, nor a Tunneling Protocol-Control plane tunnel. The Applicants therefore submit that Hurtta et al does not affect the patentability of any independent claim. Furthermore, nowhere does Hurtta et al show or suggest an Interworking Function, a Tunneling Protocol-User plane tunnel between an interworking function and a second support node for transferring data signals, and a Tunneling Protocol-Control plane tunnel.

The Applicants therefore request the Examiner to reconsider the rejection.

Respectfully submitted,
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